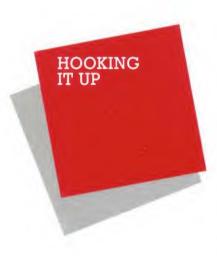
## THE ATARI 600X HOME COMPUTER OWNER'S GUIDE







All you need to set up your ATARI 600XL Home Computer is a television and a screwdriver. Atari provides the rest: the console, a TV switch box, a cable for connecting the computer and the television, and an AC Power Adapter. Set-up takes just a few minutes.

Remove protective, clear plastic covers from around the keyboard when you unpack the computer.

### ◆ Installing the TV Switch Box

1. Disconnect the VHF antenna or cable TV line from your television set and reconnect it to the side of the TV Switch box labeled ANTENNA. If the antenna has a flat, twinlead cable, connect it to the 300-OHM screw terminals on the switch box. If it's a round cable—a coaxial cable from an external antenna or a thin cable from a built-in antenna-attach it to the 75 OHM threaded connector.





2. Connect the short, twin-lead cable on the TV Switch box to the VHF connection on your TV set. If the VHF connection on your set has two screw-type terminals, secure the two cable leads to the terminals. If the VHF connection on your TV is a round threaded terminal, the TV Switch Box cable must be attached to the adapter supplied with your TV set.

First, connect the twin leads of the TV Switch Box cable to the two screw terminals on the adapter. Then slip or screw the adapter onto the threaded terminal of your TV set, making sure that the pin in the adapter makes contact. If no VHF adapter was supplied with your TV set, you can purchase one at a video store.



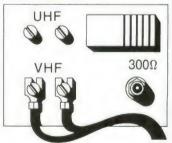
3. Peel the protective cover from the self-adhesive square on the TV Switch Box and press the switch box to the back of your television set so it sticks to the cabinet.

If the antenna connected to the TV Switch box uses a flat, twin-lead cable, you're now finished installing the TV Switch Box; go to step 5.

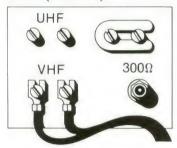


4. If your antenna uses a round (75-OHM) cable and you did not use the adapter described in step 2, you may need to adjust your TV set so it can accept the 300-OHM signal from the TV Switch Box. Make the necessary adjustments as shown in the illustrations.

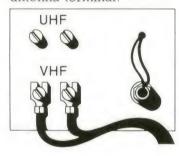
If the back of your set looks like this, push the switch to the 300-OHM (300  $\Omega$ ) position.



If it looks like this, loosen the screws holding the U-shaped slider and move the slider to the position marked 300 OHM (or  $300 \Omega$ ).



If it looks like this, insert the tiny wire into the hole in the center of the antenna terminal.



- ◆ Connecting Your Computer Console to the TV Switch Box
- **5.** Plug one end of the connecting cable into the terminal marked COM-PUTER on the TV Switch Box. Plug the other end into the jack labeled SWITCH BOX on your computer.



- 6. Move the sliding switch on the TV Switch Box to the COMPUTER position. [Don't forget to slide this switch back to the TV position when you're finished using your computer and want to watch regular TV.]
- 7. Connect the two-pronged plug on the AC Power Adapter to an electrical outlet. The round plug slips into the POWER IN jack on the back of your computer.
- 8. Turn on your TV set and tune it to Channel 2 or 3—whichever channel is weaker in your area.
- 9. Set the Channel Select Switch on the back of the computer (next to the POWER IN jack) to the same channel. After you turn on your computer, you may need to adjust the fine-tuning knob on your TV set to improve reception.

10. Your ATARI 600XL Home Computer is now ready to use. The main power switch is located on the far right side of the rear of the console. A few seconds after you turn your computer on, you'll be greeted by the word READY from the ATARI BASIC language.

If you leave the computer on one display long enough, the colors on your TV screen begin changing periodically. This is normal and occurs to protect your TV set.

Please note that when you turn off the computer, you must wait 3 to 5 seconds before turning it back on.





When you turn on your ATARI 600XL, it automatically tests itself. You also have the option of double checking the system with a series of visual and sound tests.

These tests check the computer's memory, sound and colors, and keyboard to ensure that they are working properly. Before you use the computer the first time, you should put the computer through the entire self-test routine.

Thereafter, you'll only need to run the tests occasionally, because each time the computer is turned on, it runs a test on its memory circuits. If the memory circuits ever fail the automatic test, the first thing you'll see on

your TV screen are the words MEMORY TEST and several red and green squares and rectangles. The built-in BASIC and any software—cartridge, diskette or cassette—that you try to use will be ignored by the computer.

If this happens, your computer needs service. Contact your ATARI Home Computer retailer or factory authorized ATARI SERVICE<sup>SM</sup> center.

### ◆ The Self Tests

Start the self tests by either holding down the **OPTION** key while turning the computer on or by typing BYE when BASIC says READY. A SELF TEST menu will appear on the screen. Like a restaurant menu, this

offers you a list of selections to choose from: ALL TESTS, MEMORY TEST, AUDIO-VISUAL TEST, and KEYBOARD TEST. Press SELECT to choose which test you want, then press START to begin. Press HELP to return to the SELF TEST menu.

When you select ALL TESTS, the computer first checks its memory, with audio-visual and keyboard tests automatically following. The computer does everything for you.

The tests are repeated until you press **HELP** to return to the menu. Press **RESET** to stop tests and return to ATARI BASIC.

### SELF TEST MEMORY AUDIO-VISUAL KEYBOARD ALL TESTS



### Memory Test

Memory makes it possible for a computer to store information which can be recalled when necessary. When you select this test, you're telling the computer to check both its Read-Only Memory (ROM) and its Random-Access Memory (RAM).

ROM is permanent, noneraseable memory in which your computer's operating system is stored. If anything is wrong with it, your computer may not operate properly. RAM is the memory your computer has available for programs you load into it or write yourself.

The memory test works a little like a stoplight. Two rectangular color bars appear on the screen when the ROM is tested. If the bars turn green, the ROM is in good condition and you may proceed. A red color bar means STOP: Your computer's ROM is malfunctioning, and you should contact your ATARI Home Computer retailer or Factory Authorized Service Center.



During the RAM test, 16 small color squares appear one by one on your screen. Each square represents a portion of RAM that is being used by your computer. As each section of RAM is tested, the corresponding square turns white, then green if the section is good. If none of the squares turn red, the RAM in your computer is properly functioning.

### Audio-Visual Test

The audio-visual self test checks your computer's four programmable sound voices and its color and graphics capability. A musical staff and treble clef appear on the screen above the number of the voice being tested. Six notes are played and displayed on your TV screen. The six notes repeat once for each of the four voices.

If a voice number appears but you don't hear music, that voice is not working properly.

The colors displayed should be consistent during each test.



### The Keyboard Test

You work with two keyboards when you select this test, the one under your fingertips and a facsimile that appears on the screen. When you press a key on the console, a corresponding key on the TV screen flashes in inverse video (a blue character on a white background) and a note



sounds. The space bar and certain keys are already in reverse video, so pressing one of them changes the matching key on the screen to normal video. If nothing happens on the screen when you press a key, that key is not working.

The keys in the top row of the screen keyboard are located on the far right side of your computer keyboard. Disregard keys numbered 1-4. Reading from left to right, the keys in the screen's top row include: RESET, START, SELECT, OPTION, four numbered keys, HELP, REVERSE VIDEO ( ), and BREAK. Otherwise, the two keyboards have the same arrangement of kevs.

The SHIFT and CON-TROL keys flash only when pressed simultaneously with another key.

There are three keys that do not flash or sound that terminate the test when pressed. HELP returns you to the SELF TEST menu. RESET returns you to BASIC, and pressing BREAK evokes no response.



Software adapts the computer to a specific job. whether it's storing names and addresses, acting as your personal bookkeeper, or providing you with a video arcade in your living room. It's up to you to select which ready-to-use software you need.



### Thanks for the Memory

The amount of memory in a computer determines how much data it can store. Your 16K ATARI 600XL Home Computer has plenty of memory for most purposes, but certain types of software require more. For example, the popular ATARI Bookkeeper program requires 48K RAM. If you decide to use such software, purchase an expansion Memory Module<sup>TM</sup> from your Atari retailer.\*

### Installing a Cartridge

Many games, computer applications, and programming languages come in the form of cartridges. When you are ready to start your work or play, simply insert the cartridge firmly with the label facing you into the cartridge slot on top of the console. If you have just been using another software program on the computer, press RESET to clear the computer's memory after inserting the new program cartridge.

\*estimated availability: second half of 1983.







You communicate with your computer through the ATARI 600XL Home Computer's easy-to-use keyboard, which is set up like a typewriter. You can do a lot more, however, than just type on this keyboard.

You can throw away your ink eraser and editing pencils, for you can now move and transform text and computer programs on the screen with a few keystrokes. To correspond with a pen pal in his native French or write a report in Spanish, you can use an array of international alphabetic characters. You can use the ATARI 1020™ 40-Column Color Printer/ Plotter, the ATARI 1025™ 80-Column Printer, and the ATARI 1027™ Letter-Quality Printer to print international characters. You can even display graphic

symbols to create art or make charts and other presentations more interesting and appealing. Refer to the manual that comes with each printer for specific instructions.

On the next few pages you'll find the simple commands— keystrokes or keystroke combinations—that enable you to tell your computer to perform the operations you wish.





The white square you see on the screen is the *cursor*; it shows you "where you are" on the display.



You use some keys on the computer keyboard the same way you would on a typewriter. The SHIFT key capitalizes letters, and TAB moves the cursor quickly across your screen to predetermined stops.

Beyond these basics, there are a number of keys that allow you to reach into a bag of editing tricks. The CON-TROL and SHIFT keys play important roles in screen editing and in generating both graphics and international characters. They help you move the cursor, delete or insert individual characters or entire sentences, or change from uppercase to lowercase letters. To perform a function, another key must be pressed while holding down CONTROL or SHIFT.

The chart on the following two pages shows you how to change the way information is displayed on the screen.

A Few Comments About the Chart:

Since certain key functions may be redefined by certain programs, always consult your program owner's guide for further help.





OPTION

Chooses among variations within a program.



RESET

Stops the computer in the middle of what it's doing and returns the program to its opening screen. It does not usually erase your work in RAM memory. RESET sometimes has undesirable side effects, such as interfering with the closing of open DOS files. Generally, BREAK is the preferred key for stopping a program. Consult the instructions for the software program you are using.



Usually tells the computer to begin running a game or program; refer to the individual program instructions for its exact function.



Often used to select one of several applications within a program; its function varies from program to program—refer to the individual program instructions for its exact use.



With some software, gives access to information that can guide you through a program when you need help.



Usually interrupts whatever function the computer is performing; refer to individual program instructions for its exact function.



Varies from program to program; for example, ESC may be used to take you from one menu to another.



Controls a variety of features when pressed simultaneously with another key





Inserts a space where the cursor is in some programs or when you're programming. Characters may be entered by typing over the inserted space.



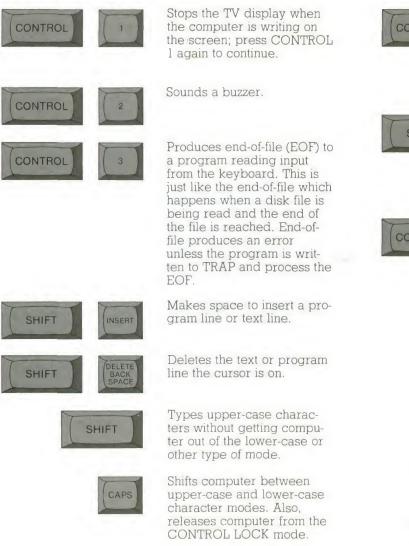
Moves the cursor back one space, deleting what was typed. If held down, it continues deleting characters.

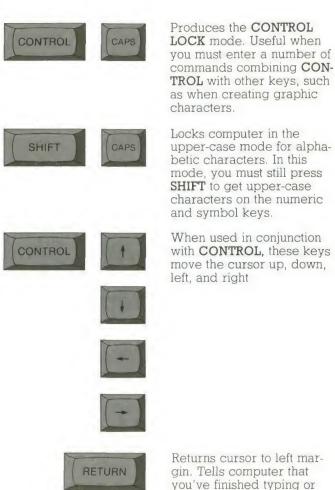




Deletes character at the position of the cursor and shifts remaining characters. on the line so that the space is filled.







editing a line.

Reverse Video turns re-

off. In some ATARI programs, this key is referred to as the Atari logo ( ) key.

Auto Repeat when you press any key and continue holding it down, the character repeats itself until you

release the key.

verse video mode on and



There are 29 graphics characters built into the computer keyboard for occasions when you want to brighten up a dull chart, design an eyecatching graph, create a work of computer art, or even do a little video doodling. Advanced users may find many applications for the characters while programming.

You can display graphic characters on the TV screen by pressing CONTROL and the keys shown below. If you want to produce a number of graphics characters, get into the CONTROL LOCK mode by pressing CONTROL and CAPS. Get out of the CONTROL LOCK mode by pressing CAPS only for lower case characters or SHIFT CAPS for upper case characters.

When switching from the international character mode, use the following poke in BASIC: POKE 756, 224 [Press RETURN.]

Then press **CONTROL** and the keys shown below to display graphic characters on the TV screen.





Ordinarily, when you type a draft in a foreign language that uses the same alphabet as we do, you have to go back to laboriously add accent marks, cedillas, tildes, diereses, and other diacritical marks by hand. You are spared that trouble with the ATARI 600XL Home Computer, which has an international character set built into the keyboard.

International characters are available from certain software programs, or may be obtained in BASIC using the following poke command:

POKE 756, 204 [Press RETURN]

Then press **CONTROL** in combination with the keys shown below to produce international characters on your TV screen.





Now that you are familiar with your ATARI 600XL Home Computer, let's try using the built-in ATARI **BASIC** Programming Language, a version of one of the most popular programming or computer languages. You can use ATARI BASIC Programming Language for writing computer programs in any field from education to business to the arts. The language is easy to learn, and can make your computer a more effective tool. For more information about programming, refer to the reference card packed with your computer and to the book Inside ATARI BASIC, A Fast, Fun and Friendly Approach by William Carris (available from many Atari retailers and bookstores).

The computer programs on the following page are taken from this book. They show some of the remarkable things your computer can do. Program One demonstrates the computer's color and graphics capabilities. Program Two dramatically shows how sound can add an extra dimension to a program. Progam Three is BASICally just for fun.



Since it's built in. ATARI BASIC is available for use as soon as you turn on the computer. You may override the language by either holding down the OPTION key when you turn on the computer or by plugging in a program cartridge. You may also exit BASIC by typing the letters BYE to go to the built-in self tests, or the letters DOS to activate the Disk Operating System (when you have an optional disk drive connected to your system).

If you make a mistake while typing in a line of your program, press the DELETE BACK SPACE key until you delete the error, then type the correction and continue. You may also go back to an error by holding down the CONTROL key while pressing the appropriate arrow keys. Refer to the "KEYBOARD WIZAR-DRY" section in this quide for more information about corrections.

If a program statement has more characters than will fit on one line of your TV screen, the statement will wraparound to the next line. Press the RETURN key only after typing the entire program statement. Type the following BASIC programs as written. Press BREAK when you want to stop the program being run.

Press the RETURN
key after you type in or
make a correction to
each complete program
statement (one or more
lines of program instructions beginning with a
line number). Pressing
RETURN signals the computer that you have finished typing or editing.

Before you begin each new program, type NEW to clear the computer's memory and then press RETURN.

If you don't type the program exactly as written here, after RUN is typed you will get an Error Message that looks like this:



The computer is telling you that there is a mistake in program line number 10. Return the cursor to that line and correct it. You may have to type LIST or LIST 10 to display the line on the screen in order to correct it.

### Program One:

10 GRAPHICS 11
20 LL=191
30 RL=79
40 FOR ZEBRA=0 to 48
50 REM GTIA HIWAY\* FAST LANE\*
60 COLOR ZEBRA
70 PLOT RL,LL
80 DRAWTO 0, 0
90 RL=RL-1
100 NEXT ZEBRA
110 GOTO 110

Type RUN, press RETURN, and watch it go!

### ♦ Program Two

100 GOTO 10

120 END

10 GRAPHICS 7+16: SETCOLOR 4, 0, 0: SET COLOR
1, 0, 4
20 COLOR 2
30 PLOT 2, 2: DRAWTO 30, 34: DRAWTO 78, 40:
DRAWTO 100, 57: DRAWTO 110, 50: DRAWTO 140, 76
40 FOR LIGSOU=1 TO 255
50 SOUND 0, LIGSOU, 8, 10
60 IF LIGSOU=8 THEN SETCOLOR 1,0,14
70 NEXT LIGSOU
80 SETCOLOR 1,0,0
90 FOR DE=1 TO 200: NEXT DE

### Program Three

To get the arrow in this program, press **ESCAPE** once, then hold down **CONTROL** and press **CLEAR**. Then close the quote.

10 PRINT '') '': DIM NAME\$ (20) : POSITION 2.7 20 PRINT "TYPE IN YOUR NAME AND PRESS THE RETURN KEY" 30 POSITION 4, 12: PRINT ''NAME'': INPUT NAME\$ 40 GRAPHICS 2+16 50 POSITION (20-LEN (NAME\$))/2,4: REM CENTERS THE NAME 60 PRINT #6; NAME\$ 70 POSITION 1, 7: PRINT #6; ''IS A FLASHY PERSON'': REM TYPE ''IS A FLASHY PERSON'' IN INVERSE VIDEO 80 FOR FLIP = 0 TO 20 90 FOR FLASH = 0 TO 14 100 SETCOLOR 0, 0, FLASH: SOUND 0, FLASH, 10, 10 110 NEXT FLASH 120 FOR DELAY = 1 TO 20: NEXT DELAY 130 NEXT FLIP 140 SETCOLOR 0, 0, 14: SOUND 0, 0, 0, 0 150 FOR DELAY = 1 TO 1000: NEXT DELAY 160 SETCOLOR 0, 0, 0: SETCOLOR 2, 0, 0 170 FOR DELAY = 1 TO 800: NEXT DELAY 180 RUN 190 END

Type RUN again and press RETURN.



The kind of system you build depends, of course, on how you want to use your ATARI 600XL Home Computer. There's an ATARI accessory for every computer application, including joystick controllers for playing video games, printers for writing reports, or modems for hooking up to information networks.

### ♦ Where to Store Your Data

The kind of software you use determines which peripheral devices you need. No extra equipment or "hardware" is necessary to use some cartridges, because they plug directly into the slot on top of the console. However, you cannot store your work on a cartridge.

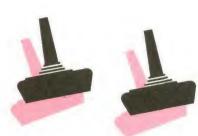
If you want to save data, or if you decide to purchase software programs on cassettes or diskettes, then you must buy a program recorder or a disk drive. Otherwise, you lose what you type on your TV screen when you turn the computer off.

The ATARI 1010<sup>TM</sup> Program Recorder offers an inexpensive way to store information. With this method, data—and sometimes sounds, music or words—are recorded on an ordinary cassette tape.

After you become an experienced computer user, of if you want to work with diskette-based programs right from the start, you may decide you want an ATARI 1050<sup>TM</sup> Disk Drive, which retrieves and stores information faster and more efficiently than program recorders. Before you use the disk drive for some applications, however, you have to purchase an expansion Memory Module from an Atari retailer. The module links with the computer at the Expansion Connection. Refer to the sales literature or packaging for the software you buy to determine if more memory is needed.







### ♦ All the Data That's Fit to Print

A printer has obvious advantages for people who want to send letters through the mail, who need a permanent record of a document on paper, or who simply get satisfaction out of seeing their efforts displayed on the printed page.

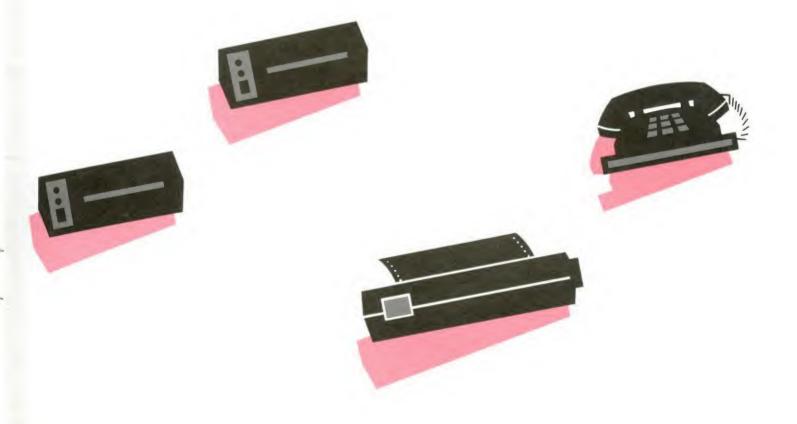
The ATARI Computer owner may select from a number of printers. The ATARI 1027TM Letter Quality Printer is a lowcost, easy-to-use device that prints letter-quality type on regular typing paper. It produces fully formed characters like the type from an electric typewriter. The ATARI 1025™ 80-Column (dotmatrix) Printer is more expensive but faster than the ATARI 1027, and uses either typing paper or computer paper. The ATARI 1025 makes typefaces composed of tiny dots. For artwork or charts and graphs, the ATARI 1020TM Color Printer may be just the tool you need. You can draw or "plot" vibrant color graphics with the printer's four color pens, or print text in various sizes.

### ◆ Telecommunications Bridges The Information Gap

Intrigued by the promises of home information services? With an ATARI MODEM, you can transmit and receive information from these and other sources over standard telephone lines.

An ATARI MODEM provides access to computer databases, transportation and entertainment schedules, and a variety of specialized information systems such as the COMPUSERVE INFORMATION SERVICE\* and THE SOURCE, AMERICA'S INFORMATION UTILITY.\*\*

\*Registered trademark of CompuServe, Inc., an H&R Block company \*\*THE SOURCE and AMERICA'S INFORMA-TION UTILITY are service marks of Source Telecomputing Corporation, a subsidiary of The Reader's Digest Association, Inc.





Here are a few suggestions for making the space where you use your computer a pleasant place to work or play:

Do not use household solvents or cleansers on the computer.

Keep your computer clear of dust by occasionally wiping it with a moist, lint-free cloth.

Keep liquids away from the work area.



ATARI Home Computer users don't have to work or play in isolation. Most of the situations and problems you may encounter have already been met and worked out by others. Much of this computer experience is documented, so there is plenty of support available. The sources listed here are a few of the many aids which can help you or guide you to new, exciting directions for home computer use. They are available from bookstores, Atari retailers, or by writing to the addresses provided.

### ♦ Books

Albrecht, Bob; Finkel, LeRoy; and Brown, Jerald R. *ATARI* BASIC. New York: John Wiley & Sons, 1979.

ATARI BASIC Reference Manual. Atari, Inc. 1983.

Technical Reference Notes. ATARI Home Computer System. Atari, Inc. 1983.

Willis, Jerry, and Miller, Merl. *Computers for People*. Beaverton, Oregon: dilithium Press. 1982.

Poole, Lon; McNiff, Martin; and Cook, Steven. Your Atari Computer.
Berkeley, Calif.:
Osborne/ McGraw Hill, 1982.

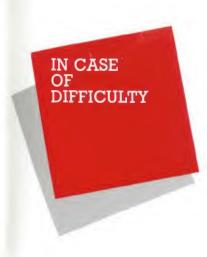
### Magazines

ATARI Connection, The Home Computer
Magazine. Get a free copy just by returning your ATARI Home Computer warranty card. You then have the option of becoming a regular subscriber. You can also write to: P.O. Box 50047, San Jose, CA 95150.

Antic—The Atari Resource. 600 18th St., San Francisco, CA 94107.

Analog Computing, The Magazine for Atari Computer Owners. P.O. Box 23, Worcester, MA 01603.

HI-RES MAGAZINE, The Complete Magazine for ATARI Users, 755 West Sanlando Springs Drive, Longwood Springs, FL 32750.



- Q. I've set up my computer following the instructions in the ''Hooking It Up'' section, but when I turn the computer on, nothing happens.
  What do I do now?
- A. If the word READY doesn't appear when you turn on your computer, retrace your steps. Make sure that all cords and cables are plugged securely and that power is coming into the system. The red Power ON/ OFF light located on the lower right side of the keyboard should be on. Try adjusting the fine-tuning knob on your TV. If you still don't get the proper display, or if the words MEMORY TEST appear on the TV screen, your computer may need servicing. For the location of the nearest ATARI Factory Authorized Service Center, contact your ATARI retailer or call ATARI customer Service toll-free (800)538-8543 [In California, call (800)672-1404].
- Q. What do I do if the red Power ON/OFF light comes on, but the TV picture is distorted?
- **A.** There are a number of things you should check:
- \* Make sure that the RF cable is plugged into the TV Switch Box, and that the Switch Box lever is turned to COMPUTER or *GAME*.
- \* The TV must receive a 300-OHM (300  $\Omega$ ) signal from the Switch Box to work properly with the computer. See if you have followed the instructions as presented in the section "Installing the TV Switch Box."
- \* Make sure the TV Channel Switch on the computer is turned to the same number as the channel selector on your TV set.
- \* Try a different cartridge in the Cartridge Slot to determine if the software is working.

  Make sure the cartridge is pressed down firmly to the bottom of the slot.
- Q. When I press the HELP key nothing happens. Why not?
- A. The HELP key is designed to work with specific programs where it gives access to helpful information when you need assistance. If the computer doesn't respond, the program you are using is probably not set up for use with the HELP key.

- Q. I just tried using the computer's built-in ATARI BASIC. I typed in a program, but it won't run. Why is that?
- A. Make sure you pressed RETURN after each program statement before typing RUN. When you press RETURN you are telling the computer that you are entering information. It's easy to forget, but nothing happens until you press RETURN.

Another common mistake is confusing zeros with the capital letter O. They look very similar, but the computer treats them as two different characters. The zero is in the top row of keys on the keyboard—with the other numbers. The letter O is in the row below it.

If you encounter further problems with language, consult the "Exploring ATARI BASIC" section or one of the books in the "You Are Not Alone" section in this guide.



Like any electrical appliance, this ATARI Home Computer uses and produces radio frequency energy. If it is not installed and used properly according to the instructions in this guide, the equipment may cause interference with your radio or television reception.

This equipment has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart I of Part 15 of the FCC rules. These rules are designed to provide reasonable protection against such interference when the equipment is used in a residential setting. However, there is no guarantee that interference will not occur in a particular home or residence.

If you believe this equipment is causing interference with your own radio or television reception, try turning the equipment on and off.

If the interference problem stops when the equipment is turned off, then the equipment is probably causing the interference. With the equipment turned on, you may be able to correct the problem by trying one or more of the following measures:

- Reorient the radio or television antenna.
- Reposition the equipment in relation to the radio or television.
- Move the equipment away from the radio or television.
- Moving the RF cable around may clear up a distorted TV picture.

**WARNING:** Only peripheral equipment certified to comply with Class B regulations as defined in Subpart J of Part 15 of the FCC rules should be attached to this computer.

Operation of noncertified peripherals with this computer is likely to result in interference to radio and TV reception.

Every effort has been made to ensure the accuracy of the product documentation in this manual. However, because we are constantly improving and updating our computer software and hardware, Atari, Inc., is unable to guarantee the accuracy of printed material after the date of publication and disclaims liability for changes, errors or omissions.

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If a cable is attached to the expansion connection, it must be a shielded cable (Atari part number CA024571 or equivalent) in order to ensure FCC compliance. Use of a non-shielded cable will void FCC certification of this device.



# EL MATERIAL EXHIBIDO ES SOLO PARA USO EDUCATIVO, NO COMERCIAL

